

# Commentary on candidate evidence

## Candidate 5

The candidate was awarded a total of **70 marks**.

### Section 1

#### Question 1(a)

The candidate was awarded **5 marks** for the following responses:

- 'Stainless steel has been used for the shelves which is corrosion resistant'
- 'nylon castor wheels...durable making them resistant to wear and tear'
- 'ABS shelves and handles...are chemically resistant...easy to clean off the dirt'
- 'mildsteel side panel...impact resistant...won't break...tools hitting and swinging off'
- 'galvanised mild steel wheel brackets...scratch resistant ensuring they look pristine'

#### Question 1(b)

The candidate was awarded **5 marks** for the following responses:

- 'tubular stainlesssteel frame...extruded'
- 'uniform cross section'
- 'ABS shelves and handles...injection moulded'
- 'allows for mass production'
- 'galvanised mildsteel wheel brackets...highly accurate' **Please note**, the explanation is correct however it's for the wrong process.

### Question 1(c)

The candidate was awarded **5 marks** for the following responses:

- '360° swivel function in the wheel allowing for easy movement'
- 'peg board on tool trolley...small things can be hung'
- 'medical trolley is the border...smaller objects don't roll off when moving'
- 'tool trolley...dented screw holders...smaller objects which can be easily lost'
- 'tool trolley is it's handles... allowing for easier transport'

### Question 1(d)

The candidate was awarded **4 marks** for the following responses:

- Benefit – 'easily fix and replace parts'
- Benefit – 'don't require specialist tools'
- Benefit – 'easily sourced in bulk'
- Drawback – 'no assurance of the level of quality'

### Question 1(e)

The candidate was awarded **4 marks** for the following responses:

- 'physical modelling can help to give ergonomic (Anthropometric) data...if made to scale'
- 'Another benefit...sense of a design's stability'
- 'aesthetics...whether it is a desirable shape, style, theme'
- 'aids the design by showing the proportion'

## Section 2

### Question 2(a)

The candidate was awarded **3 marks** for the following responses:

- 'ABS'

- 'impact resistant so it will be able to resist knocks and falls'
- 'durable...resistant to wear and tear'

### Question 2(b)

The candidate was awarded **3 marks** for the following responses:

- 'adjustable tightener as children grow at different paces'
- 'target market...delicate heads...padding has been added to ensure safety'
- 'addition of ventilation holes to allow for coolness and comfortability'

### Question 2(c)

The candidate was awarded **0 marks** because the response does not answer the question.

### Question 3(a)

The candidate was awarded **2 marks** for the following responses:

- 'gives a designer freedom to be creative'
- 'not what they are looking for'

### Question 3(b)

The candidate was awarded **2 marks** for the following responses:

- 'including function like it must do...'
- 'how big it is dimensionally'

### Question 3(c)

The candidate was awarded **3 marks** for the following responses:

- 'pencil for a walk...turns them into a design being inspired by the shape'
- 'helps to produce initial ideas efficiently'
- 'Each is different and most likely never seen before'

### Question 3(d)

The candidate was awarded **4 marks** for the following responses:

- 'oblique sketches...allow for quick experimentation of ideas'
- 'isometric...accuracy in proportion'
- 'Show more technical details and inner parts/assemblies'
- '3D CAD rendered graphics...show materials, colours'

### Question 4(a)

The candidate was awarded **4 marks** for the following responses:

- 'Buy one get one free'
- 'celebrity promotion...will endorse the product...tell their fans to buy it'
- 'Marketing additionally on social media...sense of urgency'
- 'Running giveaways...entered into prize draws'

### Question 4(b)

The candidate was awarded **2 marks** for the following responses:

- 'launch a new updated version with more additional functions'
- 'new product which coincides with existing one...use the new partner product'

### Question 5(a)

The candidate was awarded **6 marks** for the following responses:

- 'diameter/thickness of handle...persons grip diameter...grab the handle comfortably'
- 'size of the setting buttons...influenced by width of a person's fingertip...click the buttons easily'
- 'persons finger width so they can fit their fingers around the wheel and turn it easily'
- 'buttons must be easy enough to press...without causing strain'

- 'door must be light enough to pull open easily...arm strength...without causing strain to their arm'
- 'button pad uses symbols like a lightbulb...know it's for a light'

### Question 5(b)

The candidate was awarded **1 mark** for the following responses:

- 'energy costs are high air fryers came about which were very energy efficient'

### Question 5(c)

The candidate was awarded **2 marks** for the following responses:

- 'prevent design ideas from being stolen'
- 'give a company exclusivity to a design'

### Question 6(a)

The candidate was awarded **4 marks** for the following responses:

- 'magnets can be used to test metals as metals that include iron are magnetic'
- 'flame test...different metals burn at different colours'
- 'copper would be green'
- 'reheat plastic in an oven as thermoplastics ... bend back into it's original form ...thermosets will not'

### Question 6(b)

The candidate was awarded **2 marks** for the following responses:

- 'blow moulding will have split lines'
- 'blow moulding will have a hollow inside'

### Question 6(c)

The candidate was awarded **3 marks** for the following responses:

- 'Gantt charts...schedule of what and when it gets done'
- 'production of cars the chassis...build the chassis...fit an interior so it keeps it organised'
- 'Save money...people not being paid extra days...waiting on something to be completed'

### Question 7

The candidate was awarded **6 marks**. This question is marked holistically and the marks awarded are for the overall response rather than individual points made. In terms of assessing knowledge of how consideration of the environment impacts products, this candidate has demonstrated secure knowledge and has given a response which gives a wide range of environmental aspects but is lacking in depth.